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NOTES ON GEOGRAPHIC DISTRIBUTION

First confirmed record of *Catharus ustulatus* (Nuttall, 1840), Swainson's Thrush (Passeriformes, Turdidae), in Paraguay

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Abstract. *Catharus ustulatus* (Nuttall, 1840) (Swainson's Thrush), a long-distance migratory songbird, spends its nonbreeding period primarily in northwestern South America and has been listed hypothetically in Paraguay. Here, we provide the first confirmed record of the species in Paraguay, documented by photographs. This find extends the known range of *C. ustulatus* into the Dry Chaco ecoregion, with potential implications for understanding this species' nonbreeding distribution and habitat use.

Key words. Biogeography, Dry Chaco, migratory birds, Neotropics, passerines, range extension

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INTRODUCTION

Catharus ustulatus (Nuttall, 1840), Swainson's Trush, is a medium-sized, Neotropical migratory passerine. It breeds across the Boreal Forest of North America and winters in southern Mexico, Central America and northwestern South America (Mack and Yong 2020). Within its nonbreeding range, *C. ustulatus* is most abundant in Andean forests but also occurs in lowland Amazonian areas and, occasionally, in southern regions such as the Andean Yungas forests of Bolivia and northwestern Argentina (Capllonch 2012; Klavins et al. 2017; Mack and Yong 2020).

The species is primarily frugivorous during the nonbreeding months and typically occurs in forested areas, occupying both highland and lowland, dry and humid forests rich in fruit-bearing shrubs (Hilty 1980; Mack and Yong 2020). In Colombia there is some evidence of altitudinal migration as the dry season progresses (Johnson 1980), with individuals preferring higher-altitude areas with greater fruit availability.

Historical references to *C. ustulatus* in Paraguay, notably by Bertoni (1914, 1926, 1939), were vague, lacking specific documentation, and later considered hypothetical (Hayes 1995; Guyra Paraguay 2004). Misidentification with the closely related *Catharus fuscescens* (Stephens, 1817), Veery, which is documented in Paraguay, further complicated the status of *C. ustulatus* in Paraguay (Robbins et al. 1999; Pagano et al. 2013). We provide photographic confirmation of *C. ustulatus* in Paraguay, establishing this species' occurrence in the Dry Chaco ecoregion.

METHODS

Our new record was obtained during weekly avian monitoring conducted by park rangers in the Cañada El Carmen Natural Reserve since 2018. The reserve, managed by the NGO Guyra Paraguay, encompasses 4,000 ha in the Dry Chaco ecoregion near the Bolivian border. The landscape includes dry forest and alluvial fans of the Pilcomayo River, representing a heterogeneous Dry Chaco ecosystem. Field surveys involved traversing established trails, visually and aurally identifying bird species, and photographing specimens using a Canon Rebel T7 camera for subsequent identification. Geospatial data (Figure 1) for the record were processed using QGIS v.3.80.0 (QGIS 2024).

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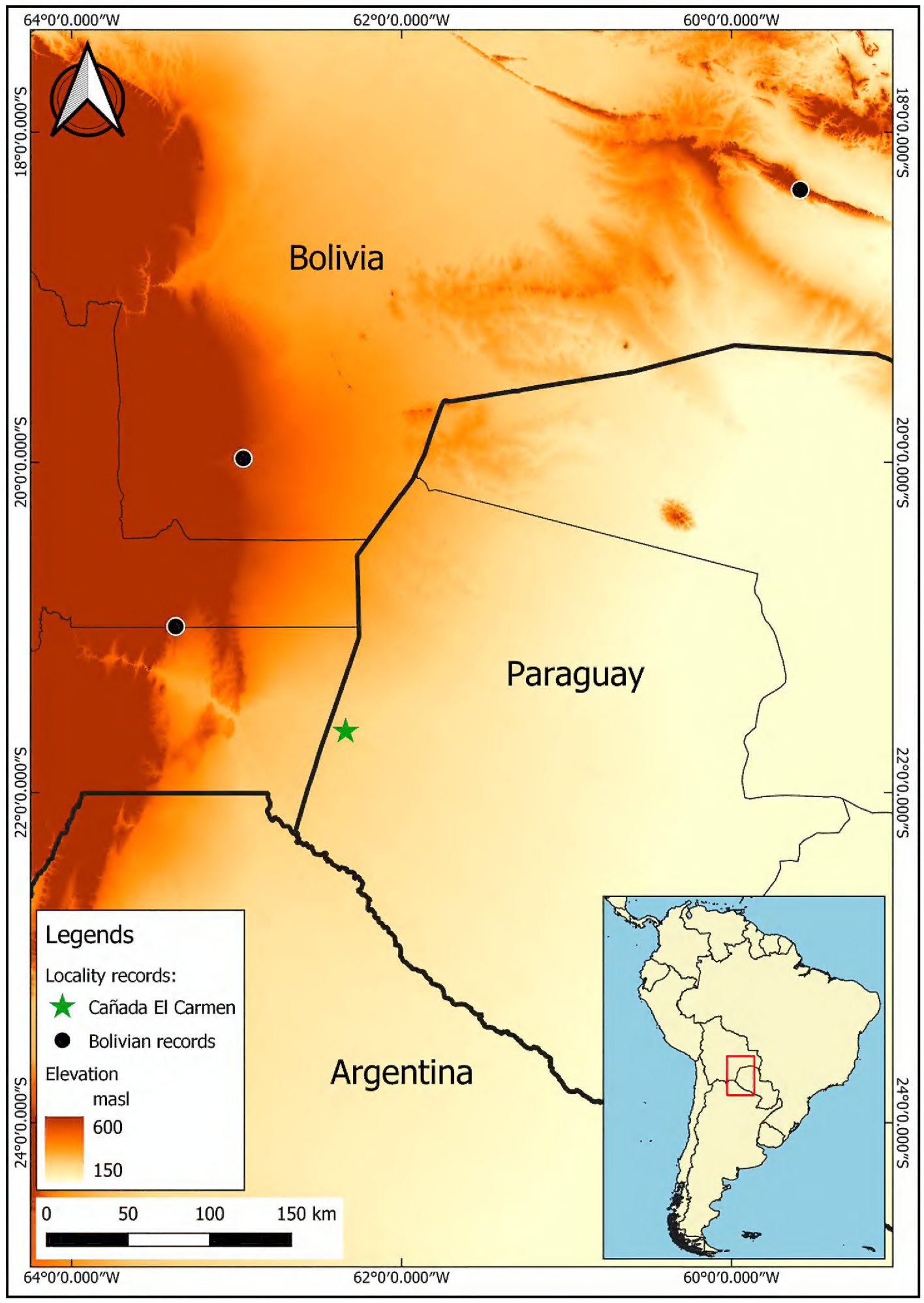

Figure 1. Geographic location of the documented record of *Catharus ustulatus* in Paraguay (green star) and Bolivian records (black dots) near the Paraguay border.

RESULTS

***Catharus ustulatus* (Nuttall, 1840)**
Figures 1, 2

New record. PARAGUAY – Boquerón, Cañada El Carmen Natural Reserve; 21°37′43″S, 062°20′19″W; 271 m elev.; D. Dávalos & R. Meza obs., 4.XI.2023; 4 individuals.

Identification. Morphological identification distinguished *C. ustulatus* from *C. fuscescens*, a species previously recorded in the Dry Chaco and Cerrado regions. Key features of *C. ustulatus* include olive-brown plumage, heavy spotting on the chest and throat, and a buffy eye ring (Figure 2). These traits contrast with the reddish-brown coloration and diffuse chest speckling typical of *C. fuscescens* (Heckscher et al. 2020). Sexual dimorphism is minimal in *C. ustulatus*, and the sex of the observed individuals could not be determined. Due to its olive back, with little contrast between the back and uppertail coverts, and the densely black spotted cream-coloured breast (Mack and Yong 2020), we conclude that it belongs to the olive-backed group (swainsoni group), which corresponds to the subspecies group expected to winter in central South America.

Figure 2. Individual of *C. ustulatus* photographed by Doris Dávalos in the Cañada El Carmen Natural Reserve, Department of Boquerón, Paraguay on 4.XI.2023.

DISCUSSION

This documented sighting represents the first confirmed record of *Catharus ustulatus* in Paraguay and extends the known southeastern limit of its nonbreeding range. The individuals were observed near the Bolivian border, approximately 11 km from previously documented Bolivian records (Herzog et al. 2016). These findings suggest that the species' nonbreeding distribution may extend further into western Paraguay than previously recognized or may be expanding southward.

Recent records of *C. ustulatus* in northeastern Argentina (Pearman and Areta 2020; Fariña et al. 2023) highlight the possibility of broader range shifts. These observations, alongside the rapid deforestation of the Gran Chaco region, underscore the need for continued avian monitoring and habitat conservation during the austral summer when Nearctic–Neotropical migrants are present.

Further studies are essential to clarify whether these sightings represent vagrant individuals or an established but overlooked population in the Dry Chaco. Systematic surveys and incidental records will contribute to a better understanding of the species' range and habitat preferences.

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ADDITIONAL INFORMATION

Conflict of interest

The authors declare that no competing interests exist.

Ethical statement

No ethical statement is reported.

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Author contributions
Conceptualization: PM. Data curation: DD, RM. Funding acquisition: HC. Investigation: PM, HC. Methodology: DD, RM. Resources: PM, HC. Supervision: HC. Visualization: PM, DD. Project administration: HC. Writing – original draft: PM. Writing – review and editing: HC, RC.

Data availability
All data that support the findings of this study are available in the main text.

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